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PROGRAM EXECUTIVE OFFICER
INTELLIGENCE AND ELECTRONIC WARFARE
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MAINTENANCE BULLETIN

AN/TPQ-37 TRANSMITTER	FILE NO. 136	REVISION
	DATE 09/14/90	CATEGORY ALL
SUBJECT TWT CURRENT MEASUREMENTS BODY AND COLLECTOR	SYSTEM AFFECTED C	

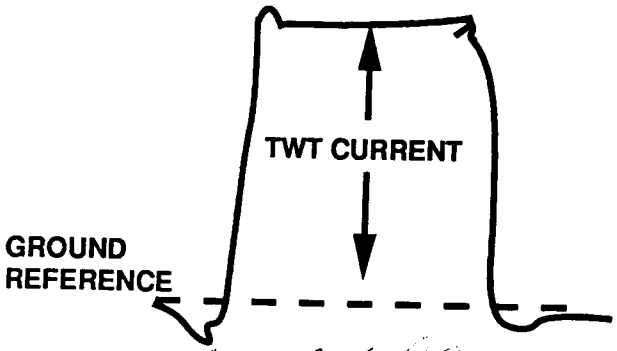
THE MAINTENANCE TASK DESCRIBED ON THIS BULLETIN IS INTENDED FOR DIRECT SUPPORT (DS) SHOPS OR HIGHER ECHELON OF MAINTENANCE.

1. PURPOSE: Page 24, Cathode Current Pulse Waveform Figure, Maintenance Bulletin 63 subject: "AN/TPQ-37 Transmitter Alinement".

2. PROBLEM: Field reports have indicated that the method of measuring TWT tube currents depicted in Maintenance Bulletin 63 may result in erroneous measurements which are higher than the actual current. The errors are the result of selecting the incorrect baseline reference from which the current pulse amplitude is measured.

3. DISCUSSION: To alleviate this possible source of error when evaluating or adjusting TWT tube currents the following clarification is provided.

The TWT current waveform has many characteristics which are not depicted in the simplified waveform provided in Maintenance Bulletin 63. The figure shown below represents a more realistic waveform as seen on the oscilloscope when monitoring the BODY and COLLECTOR currents at the Transmitter Fault Processor. The complex characteristics of the current pulse waveform makes it difficult to establish a baseline from which an amplitude measurement may be made. For simplification, with the oscilloscope vertical controls set to the proper position to measure the current pulse amplitude, the baseline reference should be established by grounding the vertical inputs of the oscilloscope and using the vertical position controls to set the trace to a selected reference line (graticule) on the oscilloscope face.



APPROVED BY CHIEF LMD _____, PMFF DATE: 10/24/90

3. Cont.

All current amplitude measurements are then made to the center of the current pulse top from this established reference line.

4. SOLUTION: Substitute the Cathode Current Waveform Figure on Page 24 of Maintenance Bulletin No. 63 with the waveform depicted in paragraph 3 above, then follow the instructions described there in to establish the reference line in the oscilloscope.

5. DOCUMENTATION: All pertinent documentation related to measurement of TWT currents will be amended to depict the more realistic waveform shown above.